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10/027,499	12/20/2001	Jon Eric Okholm	6533/53656	2002

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EXAMINER

DYKE, KERRI M

ART UNIT PAPER NUMBER

2616

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/027,499	OKHOLM ET AL.	
	Examiner	Art Unit	
	Kerri M. Dyke	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-14 and 16-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4-14,16,17,32 and 35-37 is/are allowed.
- 6) ☒ Claim(s) 18-31,33,34,38 and 39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau. (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 04/11/2006 with respect to claims 18-31, 33, 34, 38 and 39 have been fully considered but they are not persuasive.
2. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the display interface itself contains configurable control parameters) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
3. Applicant's arguments, see page 16, filed 4/11/2006, with respect to 1, 2, 4-14, 16, 17, 32, and 35-37 have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 18-31 are rejected under 35 U.S.C. 102(b) as being anticipated by "Netflow Services and Applications" referred to as Netflow.
6. In regards to claim 18, Netflow discloses a method facilitating the configuration of bandwidth management parameters (page 2), comprising the step of:

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- a. Monitoring bandwidth utilization with respect to a plurality of traffic classes (pages 1-2, list of applications Netflow enables);
  - b. Displaying the most significant traffic classes based on a network statistic (p 24, *Get TopN pulldown menu*);
  - c. Facilitating association of a displayed traffic class with a bandwidth utilization control (p 35 paragraphs 2 and 3 disclose a network manager using the display to adjust and control bandwidth utilization).
7. In regards to claim 19, Netflow discloses the method of claim 18 further comprising the step of: facilitating selection of additional traffic classes not presented in the displaying step and association of bandwidth utilization controls to the additional traffic classes. Page 2 discloses the ways that the NetFlow system can be used for bandwidth management. The user monitoring and profiling section discloses that the utilization of resources can be observed and then better allocated using NetFlow. Bandwidth is inherently one of these resources. Without bandwidth no work can be done over a network. Page 21 of NetFlow Services discloses that the interface can be used to define and modify configuration parameters. Page 23 discloses that the user can retrieve and display collected data. It is inherent that additional data can be displayed simply by repeating the retrieval process. The "Get TopN" function described on page 24 could also be run again using a larger N to display more utilization classes than were previously available. Configuration parameters could then be set for these new classes.
8. In regards to claim 20, Netflow discloses the method of claim 18 wherein each bandwidth control category maps to a set of bandwidth utilization controls. Page 10 lines 1-3 of the specification give examples of bandwidth control categories such as inbound autodiscovered and

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outbound autodiscovered traffic. The bandwidth control categories are a broad aggregate of traffic flows identified by Netflow. Each traffic flow is associated with a bandwidth utilization control and therefore, inherently, each bandwidth control category is associated with a set of bandwidth utilization controls.

9. In regards to claim 21, Netflow discloses the method of claim 18 wherein the bandwidth utilization control is implemented by an aggregate data flow bandwidth utilization control. Page 21 discusses the configuration parameters and pages 17-18 disclose the different aggregation schemes available, including by protocol type.

10. In regards to claim 22, Netflow discloses the method of claim 18 wherein the bandwidth utilization control is implemented by a per-flow bandwidth utilization control. On page 4 it is disclosed that aggregated NetFlow services can be used simultaneously with traditional, i.e. per-user NetFlow services.

11. In regards to claim 23, NetFlow discloses the method of claim 18 wherein the bandwidth utilization control is implemented by at least one aggregate data flow bandwidth utilization control and at least one per-flow bandwidth utilization control. On page 4 it is disclosed that aggregated NetFlow services can be used simultaneously with traditional, i.e. per-user NetFlow services.

12. In regards to claim 24, Netflow discloses the method of claim 18 wherein the monitoring step further comprises the step of automatically creating new traffic classes in response to data flows. Page 2 discloses that NetFlow automatically determines if a packet is part of an existing flow. If it is not a new flow is created. Parts of the packet, such as IP protocol, are monitored

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for filtering and aggregation purposes, as disclosed on pages 5-7. It is inherent that a new traffic class will be created if necessary, such as a for a new IP protocol.

13. In regards to claim 25, Netflow discloses the method of claim 18 wherein the network statistic is computed over a given analysis interval; and wherein the method further comprises the steps of: allowing for selection of an analysis interval. Page 24 discloses the time bar, which can be adjusted to establish an applicable time period for analysis.

14. Claim 26 is for an apparatus that contains a traffic discovery engine. This traffic discovery engine is operative to accomplish the method of claim 18. NetFlow is a program that is operative to accomplish the method of claim 18. It can inherently be called a traffic discovery engine. On pages 11-12 the apparatuses that can contain the NetFlow program are disclosed. Additionally, the troubleshooting section on page 35 details how a network manager can use NetFlow to identify traffic in a link, measure the bandwidth of the traffic flows, and, using the displayed information, develop bandwidth utilization controls.

15. In regards to claim 27, Netflow discloses the apparatus of claim 26 wherein the bandwidth utilization statistic is selectable by a user. Network statistics include information such as source and destination IP addresses, port numbers, and number of packets in a data flow. Pages 17-18 disclose that network statistics are included in the aggregation records. On page 3 it is disclosed that the user can select data sets, which are a collection of traffic information. It is inherent that the user could select a data set that pertains specifically to the bandwidth traffic statistics.

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16. In regards to claim 28, Netflow discloses the apparatus of claim 26 wherein the bandwidth utilization statistic is computed over an analysis interval. Page 24 discloses the time bar, which can be adjusted to establish an applicable time period for analysis.

17. In regards to claim 29, Netflow discloses the apparatus of claim 28 wherein the analysis interval is selectable by a user. Page 24 discloses the time bar, which can be adjusted to establish an applicable time period for analysis.

18. In regards to claim 30, Netflow discloses the apparatus of claim 26 wherein the traffic discovery engine is further operative to create new traffic classes in response to data flows. Page 2 discloses that NetFlow automatically determines if a packet is part of an existing flow. If it is not a new flow is created. Parts of the packet, such as IP protocol, are monitored for filtering and aggregation purposes, as disclosed on pages 5-7. It is inherent that a new traffic class will be created if necessary, such as a for a new IP protocol.

19. In regards to claim 31, Netflow discloses the apparatus of claim 26 wherein the user interface allows for the display of additional traffic classes. Page 23 discloses that the network manager can select any data set for viewing, which includes additional traffic classes.

***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Netflow.

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22. In regards to claims 33 and 34, Netflow discloses the method of claim 18 and the apparatus of claim 26. Netflow discloses a function called *Get TopN* that limits the traffic classes displayed to the top N classes. Netflow does not disclose further limiting the top N in order to display only the top N that are consuming more than a minimum percentage of the bandwidth. Official notice is taken that it would have been obvious to one of ordinary skill in the art to limit the displayed traffic classes to those consuming more than a minimum percentage of bandwidth because doing so allows a network manager to quickly and easily identify the traffic flows that have the greatest impact on the network. One of the goals of Netflow is to enable network managers to diagnose and fix congestion, as described in the troubleshooting section of page 35, particularly the last paragraph. Displaying all traffic classes or even the top N traffic classes could easily overwhelm the network manager and obscure the real causes of congestion. In addition, making changes to low bandwidth users will have little effect on network conditions.

23. Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Netflow in view of Ohyoshi (US 6,094,419).

24. In regards to claims 38 and 39, Netflow discloses the method of claim 18 and the apparatus of claim 26, but not wherein the bandwidth utilization control is one of a plurality of bandwidth utilization controls, and wherein the plurality of bandwidth utilization controls are hierarchically inter-related such that changing the bandwidth utilization control of the displayed traffic class to a higher-ranked or a lower-ranked bandwidth utilization control causes a corresponding increase or decrease of priority for the bandwidth utilization.



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25. Ohyoshi discloses a hierarchy of bandwidth utilization controls in figure 17. As indicated by the equations in figure 17, if a higher-ranked control is decreased, all lower-ranked controls will also be decreased.

26. It would have been obvious to one of ordinary skill in the art to use the ranked bandwidth controls of Ohyoshi as the bandwidth controls of Netflow because doing so helps to preserve the desired priority and prevents congestion and packet loss, as taught by Ohyoshi in lines 60-65 of column 1.

***Allowable Subject Matter***

27. Claims 1, 2, 4-14, 16, 17, 32, and 35-37 are allowed.

28. The following is a statement of reasons for the indication of allowable subject matter:

Claim 1 includes limitations indicating that the user interface includes menus and other interactive tools to change the network resource utilization. Netflow, however, is a display tool only. A network manager must use the information displayed to perform separate calculations and simulations. The changes to the network resource utilization allowed for each traffic class must then be uploaded to the network through a separate process. It cannot be done using the display program provided by Netflow.

***Conclusion***

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fingerhut et al. (US 7,039,577) discloses a method and apparatus for collecting network resource utilization statistics for traffic flows and displaying the information to a network manager.

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30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Dyke whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Friday, 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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